

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14867

GW Reviewer Byron Ebner Date Review Completed: 6/3/2026

Summary of Same Source Review:

☐ The proposed change in point of appropriation is not within the same aquifer as per OAR 690-380-2110(2).

Summary of Water Level Decline Condition Review:

☐ Water levels at the original point(s) of appropriation have exceeded the allowed decline threshold defined by conditions in the originating water right.

Summary of Injury Review:

☐ The proposed transfer will result in another, existing water right not receiving previously available water to which it is legally entitled or result in significant interference with a surface water source as per 690-380-0100(3).

Summary of GW-SW Transfer Similarity Review:

☐ The proposed SW-GW transfer doesn't meet the definition of "similarly" as per OAR 690-380-2130.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations.



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Ground Water Review Form:

- ☒ **Water Right Transfer**
☐ **Permit Amendment**
☐ **GR Modification**
☐ **Other**

Application: T-14867

Applicant Name: Joseph D. Worden & Alma D. Worden

Proposed Changes: ☒ POA ☐ APOA ☐ SW→GW ☐ RA
☐ USE ☒ POU ☐ OTHER

Reviewer(s): Byron Ebner

Date of Review: 6/1/2026

Date Reviewed by Basin Hydrogeologist and Returned to WRSD: GCF 6/3/2026

The information provided in the application is insufficient to evaluate whether the proposed transfer may be approved because:

- ☐ The water well reports provided with the application do not correspond to the water rights affected by the transfer.
- ☐ The application does not include water well reports or a description of the well construction details sufficient to establish the ground water body developed or proposed to be developed.
- ☐ Other _____

1. Basic description of the changes proposed in this transfer: Two applications for the same proposed changes. T-14866 is a permanent transfer and T-14867 is a temporary transfer for Certificate 41331. This review is for the temporary transfer, T-14867.

Applicants are proposing to move POA and POU (18.5 acres) approximately 20 miles NW from T-27S-R17E-Section 9, SENE to T-26S-R14E-Section 20, SWSW and SESW.
Authorized POA has no log correlated and proposed POA is LAKE 350.

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?
☒ Yes ☐ No Comments: Groundwater in the Fort Rock/Christmas Valley area, also referred to as the Fort Rock Classified Area, is viewed as a single flow system. Groundwater is found in both the overlying basin fill sediment as well as the underlying unit, which is predominantly volcanic rock, and occurs in "confined, unconfined and perched conditions that reflect local variations in permeability of overlying rocks" (Miller, 1986). Miller (1986) also notes that groundwater in the Fort Rock Basin consists of "numerous water producing zones in several formations" that generally have common potentiometric level and are very transmissive. These units are all capable of yielding groundwater and are viewed as hydraulically connected to one another.

3. a) Is the existing authorized POA subject to a water level decline condition?
☐ Yes ☒ No Comments: No decline conditions associated with Certificate 41331, but a hydrograph is provided as Figure 2 at the end of the document.
- b) If yes, for each POA identify the reference level, most recent spring-high water level, and whether an applicable permit decline condition has been exceeded: _____
4. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No Comments: One source developed.
- b) If yes, estimate the portion of the right supplied by each of the sources and describe any limitations that will need to be placed on the proposed change (rate, duty, etc.): _____
5. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another ground water right**?
☒ Yes ☐ No Comments: Proposed POA is moving 7269 ft away from LAKE 363, which is an irrigation well that is a POA for certificates 92359 and 98008.
- b) If yes, would this proposed change, at its maximum allowed rate of use, likely result in another groundwater right not receiving the water to which it is legally entitled?
☐ Yes ☒ No If yes, explain: A Theis drawdown analysis was performed for this proposed change in POA using an intermediate storage coefficient of 0.001, transmissivity estimate of 15,000 ft²/day from McFarland and Ryals (1991), and a maximum pumping rate of 0.23 CFS for a duration of 245 days. Considering pumping from both the proposed POA and the affected well, the estimated increase in drawdown from the proposed POA is 0.48 ft for a max drawdown of 3.13 ft. This increase in drawdown would not meet the standard of "substantial or undue interference". The Theis drawdown analysis is included as Figure 3.
6. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another surface water source**?
☒ Yes ☐ No Comments: Proposed POA is moving closer to Paulina Marsh. This reduced intervening distance may result in an increase in interference with a surface water source.
- b) If yes, at its maximum allowed rate of use, what is the expected change in degree of interference with any **surface water sources** resulting from the proposed change?
Stream: Paulina Marsh ☒ Minimal ☐ Significant
Stream: _____ ☐ Minimal ☐ Significant
Provide context for minimal/significant impact: Proposed POA (LAKE 350) is 5.6 miles away from the perennial extent of Silver Creek, while the original authorized POA is 14.4 miles away from Silver Creek. Due to the large distance between Paulina Marsh and the proposed POA, any increase in interference should be minimal.
7. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly (as per OAR 690-380-2130) to the authorized point of diversion specified in the water use subject to transfer?
☐ Yes ☐ No Comments: _____
8. What conditions or other changes in the application are necessary to address any potential issues identified above: _____

9. Any additional comments:_____

References

- Application File: T14867
- McFarland, W. D., & Ryals, G. N. (1991). Adequacy of available hydrogeologic data for evaluation of declining ground-water levels in the Fort Rock Basin, south-central Oregon. In Water-Resources Investigations Report (USGS Numbered Series Nos. 89–4057; Water-Resources Investigations Report, p. 47). U.S. Geological Survey ; Books and Open-File Reports Section [distributor],. GW Library (B4).
<https://doi.org/10.3133/wri894057>
- Miller, D. W. (1986). Ground Water Conditions in the Fort Rock Basin, Northern Lake County, Oregon (No. 31; Ground Water Report, p. 196). Oregon Water Resources Department. GW Library (A3).
- Theis, C.V., 1941, The effect of a well on the flow of a nearby stream: Am. Geophys.

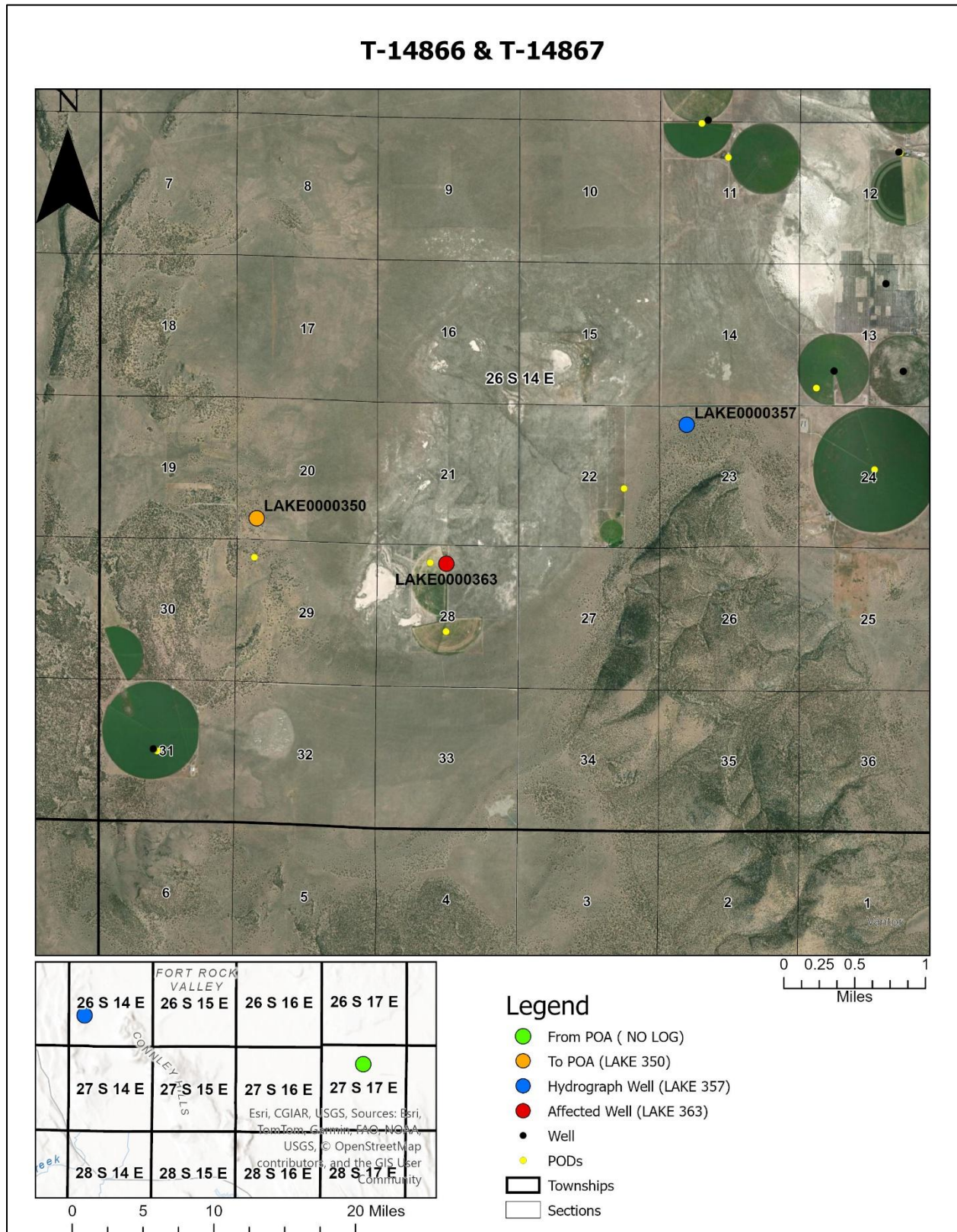
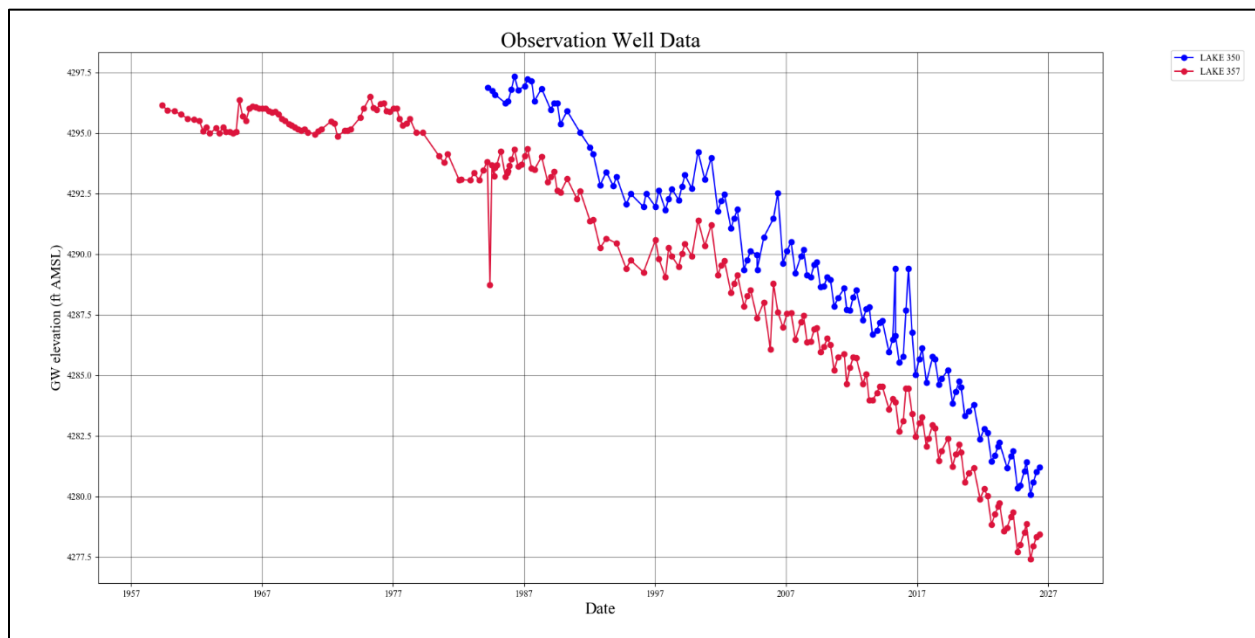
Figure 1: Map

Figure 2: Hydrograph

LAKE 350 has had consistent measurements since 1984 and shows a decline of approximately 0.57 ft/ year since May 2006. LAKE 357 is a nearby state observation well that tracks with LAKE 350 and has a longer period of record that begins in 1959.

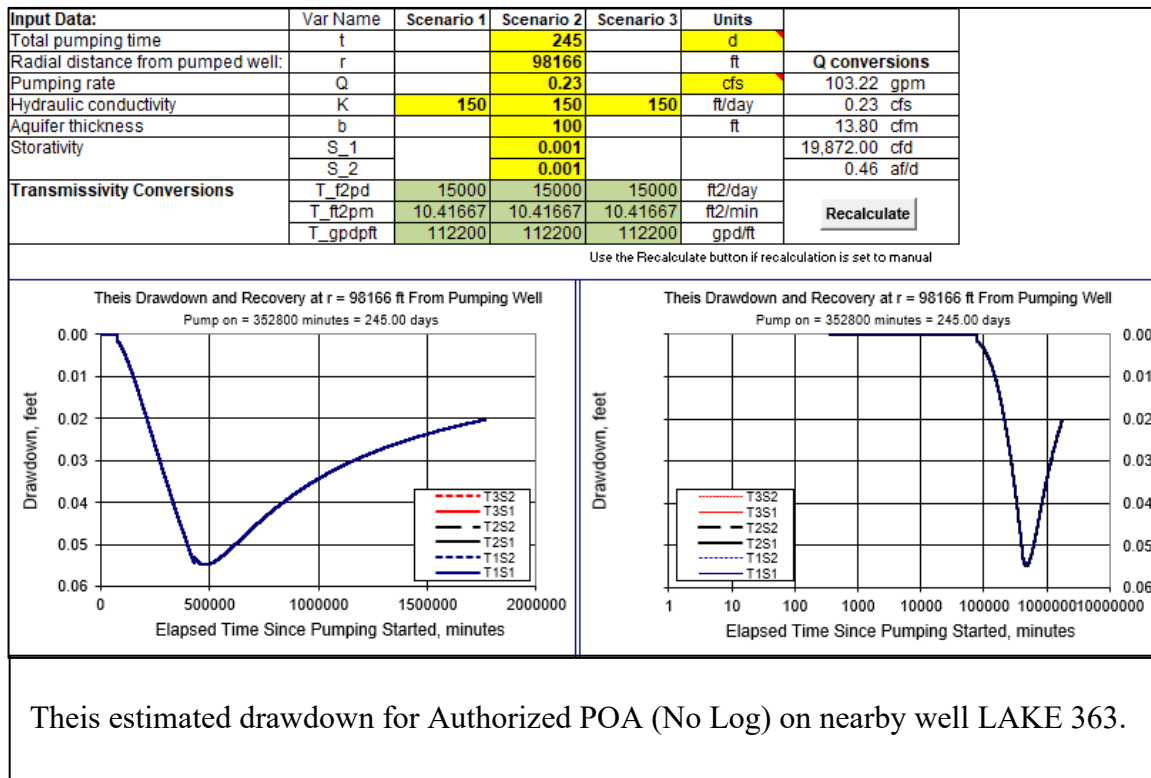
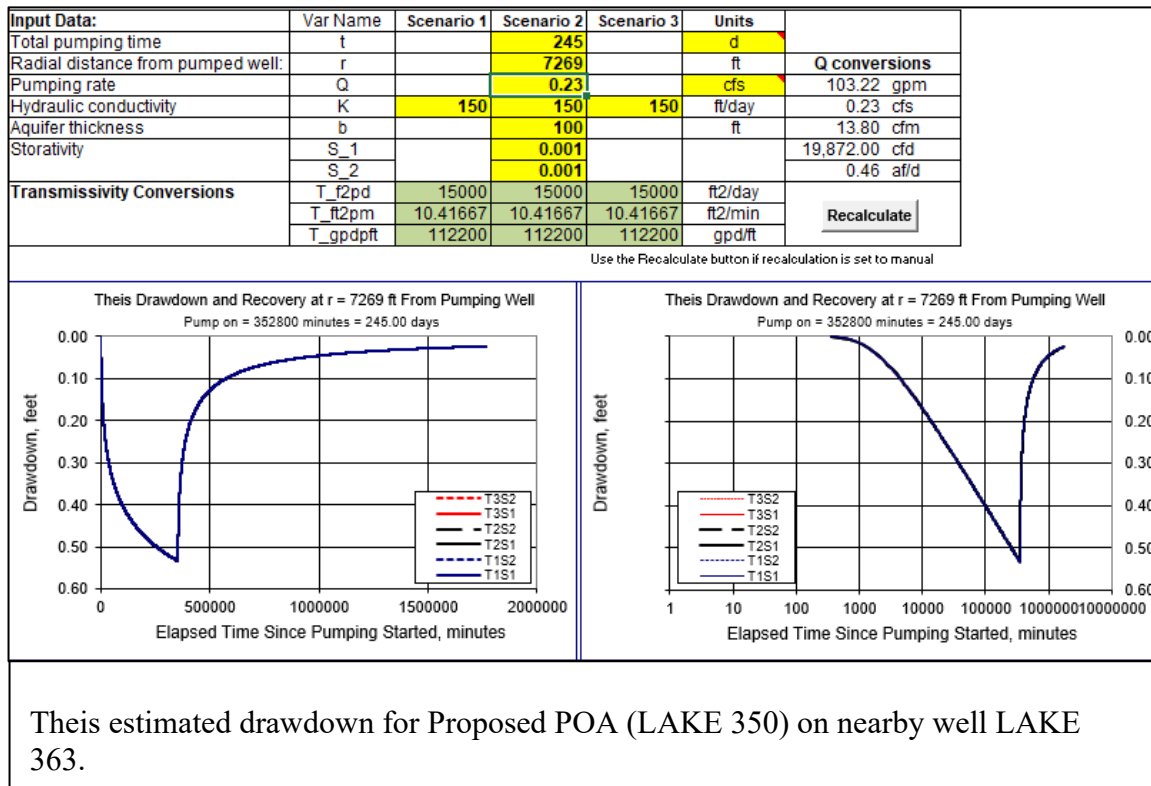
Figure 3: Theis Drawdown

Figure 3: Theis Drawdown (Contd.)